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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,780	10/20/2005	Yafan Huang	22542-010 NATL	1359

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BOSTON, MA 02111

EXAMINER
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BAGGOT, BRENDAN O

ART UNIT	PAPER NUMBER
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1638

MAIL DATE	DELIVERY MODE
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07/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,780	HUANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brendan O. Baggot	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 11 April 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-61 is/are pending in the application.  
4a) Of the above claim(s) 5 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-4, 6-61 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 13 May 2005 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Restriction / Election***

1. The Office acknowledges the receipt of Applicant's restriction election, filed 4/11/07.
2. Applicant's election without traverse of Group II, claims 1-61 drawn to SEQ ID NO: 5 alone in the reply filed on 4/11/07 is acknowledged. Instant SEQ ID NO: 4 is withdrawn from further consideration as being drawn to a non-elected invention.
3. Claims 1-61 are pending and examined in the instant application. This restriction is made FINAL.
4. Claim 5 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected sequences, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/11/07.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
6. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a

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separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Sequence Listing***

7. Applicant's computer readable format sequence listing has been entered.

### ***Specification***

8. The abstract of the disclosure is missing. Appropriate correction is required.

9. The disclosure is objected to because of the following informalities: "embryos were incubate at 26-28...". (page 61, 3<sup>rd</sup> paragraph). Appropriate correction is required.

### ***Drawings***

10. The drawings are acceptable for examination.

### ***Claim Objections***

11. Claim 26 is objected to because of the following informalities: "of" is misspelled. Appropriate correction is required.

### ***Claim Rejections - 35 U.S.C. §102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. §102.

12. Claims 1-61 are rejected under 35 U.S.C. 102(a & e) as being anticipated by Harper et al (WO 2002/16655, published 28 February 2002, filed ) in light of Harper et al (Genbank Database. Accession No. AX510060, WO 2002/16655:SEQ ID NO: 2071, 28 February 2002) and Harper et al (Genbank Database. Accession No. AX507376, WO 2002/16655:SEQ ID NO: 4755, 28 February 2002).

Harper describes SEQ ID NO: 4755 which is 97.9% identical to Applicant's SEQ ID NO: 5. and SEQ ID NO: 2071, the hydroxypyruvate reductase (HPR) enzyme coding sequence beginning with an atg-gcg for methionine and alanine which are the first two codons of said enzyme.

Harper discloses an isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 5 (See sequence listing for SEQ ID NO: 2071 and 4755, (page 5, lines 10-11; sequence listing; Table 1 on page 111; Table 2 on page 139), wherein said nucleic acid molecule is less than 600 nucleotides in length, an isolated nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:5, wherein said sequence regulates transcription of an operably linked nucleotide sequence of interest, wherein said sequence regulates transcription by inducing expression in response to a stimulus, wherein said stimulus is light or an environmental stress.

Harper's first two codons of the coding regions of the structural gene – atg-gcg – for HPR are the same as the last six nucleotides – atg-gcg – of Applicant's "promoter". Applicant has incorrectly added the first two codons of the enzyme on to the end of the promoter for said enzyme thus incorrectly determining the boundaries of the HPR promoter. This 6 nucleotide addition to Harper's SEQ ID NO: 4755 leads to the extended Harper's SEQ ID NO: 4755 being 100% identical to Applicant's SEQ ID NO: 5.

Harper discloses an isolated nucleic acid construct (page 15, line 14; page 5, line 27) comprising a promoter sequence comprising the nucleic acid sequence of Applicant's SEQ ID NO: 5 operably linked to a nucleotide sequence encoding a heterologous gene (page 5, line 19), wherein said heterologous gene encodes a protein of interest or fragment thereof, wherein said construct comprises at least two promoter sequences, wherein said spacer sequence operably links said promoter sequences, further comprising a nucleic acid encoding a selectable marker (p. 13, Ln. 8, p. 19, Ln. 2), further comprising a nucleic acid encoding a reporter gene (p. 15, col. 30-32, Ln., p. 17, Ln. 2; p. 33, Ln. 9), wherein said heterologous gene is capable of altering an agronomic trait, wherein said agronomic trait is disease resistance, herbicide resistance, environmental stress resistance, enhanced growth, or increased yield (p. 58, Ln. 19-22,), wherein said heterologous gene is a plant gene (p. 1, Ln. 5, p. 3, Ln. 23), wherein said heterologous gene is a structural gene (p. 35, col. 7), wherein said structural gene is an enzyme (Table 1, SEQ ID NO: 2071, SEQ ID NO: 337, SEQ ID NO: 872), a transcriptional regulator, a chaperonin protein (page 85, Table 1, SEQ ID NO: 102) or a scaffolding protein, wherein said enzyme is farnesyl transferase alpha

(SEQ ID NO: 701), farnesyl transferase beta or CaaX prenyl protease, wherein said isolated nucleic acid construct is operably linked to a non-translatable mRNA molecule of a gene encoding a protein of interest, wherein said non-translated mRNA molecule is an antisense nucleic acid, a hairpin RNA or a micro RNA (p. 11, Ln. 26, p. 12, Ln. 25, p. 40, Ln. 21-32, p. 49, Ln 15-30).

Harper discloses a vector comprising (page 5, lines 9-25) Applicant's SEQ ID NO: 5, a cell comprising said vector (page 5, lines 9-25, p. 20, Ln. 28; p. 45, Ln. 23-29), wherein said cell is a plant cell (page 5, lines 9-25; p. 45, Ln. 30), wherein said plant cell is monocotyledonous or dicotyledonous. ( p. 64, Ln. 20-21).

Harper discloses a method of producing a transgenic plant (page 5, lines 3-25) and transgenic plants and seeds therefrom, including wherein said seed produces a plant that expresses said protein of interest (page 9, lines 15-30; claim 120), said method comprising introducing into a plant cell (page 5, line 17) said vector comprising Applicant's SEQ ID NO: 5, to generate a transgenic cell and regenerating a transgenic plant from said transgenic cell, wherein said transgenic plant expresses said protein of interest, wherein said expression is constitutive, wherein said expression is inducible 49, wherein said plant cell is monocotyledonous, wherein said plant cell is dicotyledonous.

Harper discloses a method (page 9, lines 15-30; claim 120) of expressing a heterologous protein comprising introducing into a cell said construct and expressing said heterologous protein in said cell, wherein said cell is a plant cell, wherein said plant

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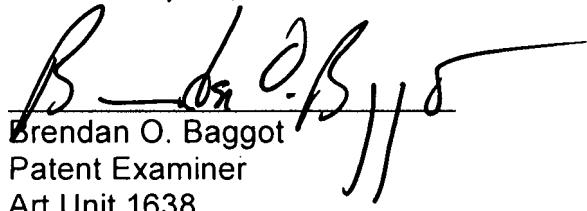
cell is monocotyledonous or dicotyledonous. (p. 64, Ln. 20-21). Thus, the reference describes all the limitations of the Claimed invention.

13. All Claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brendan O. Baggot whose telephone number is 571/272-5265. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571/272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Brendan O. Baggot  
Patent Examiner  
Art Unit 1638

DAVID H. KRUSE, PH.D.

PRIMARY EXAMINER

  
David H. Kruse, PhD  
Primary Examiner  
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bob